

ORDER # 4-20-71  
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| IS, J.A.         |     |     |
| OVER, W.S.       |     |     |
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| NNI, B.J.        |     |     |
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| ALY, T.J.        |     |     |
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| SING, T.L.       |     |     |
| NDLIN, N.B.      |     |     |
| CHWARTZ, J.K.    |     |     |
| ETLOCK, G.H.     |     |     |
| TEWART, D.L.     |     |     |
| TIGER, S.G.      | X   | X   |
| GBIN, P.M.       |     |     |
| DORHEIS, G.M.    |     |     |
| ILSON, J.M.      |     |     |
| WILSON, M.S.     | X   | X   |
| ETERMAN, B.D.    | X   | X   |
| WILSON, B.A.     | X   | X   |
| WILLER, W.A.     | X   | X   |
| SMITH, S.B.      | X   | X   |
| WATZ, W.         | X   | X   |
| WATKINS, M.E.    | X   | X   |
| WATKINS, C.D.    | X   | X   |
| WATKINS, J.P.    | X   | X   |
| GREENE, G.T.     | X   | X   |
| RECORDS CTR (2)  | X   | X   |
| CORRES CONTROL   | X   | X   |
| ADMIN RECORD/080 | X   | X   |
| ERM TRACKING     |     |     |
| TRAFFIC          |     |     |
| PATS/T130G       |     |     |

# EG&G ROCKY FLATS

EG&G ROCKY FLATS, INC.  
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May 2, 1995

95-RF-03854

## ADMIN RECORD

Jessie M. Roberson  
Assistant Manager for  
Environmental Restoration  
DOE/RFFO

### INDUSTRIAL AREA OPERABLE UNIT STOP WORK ORDER IMPLEMENTATION PLAN (08272) - SGS-144-95

Action: Review Implementation Plan

EG&G Rocky Flats, Inc. is in receipt of your letter dated April 11, 1995, confirming the stop work order of March 7, 1995, and requesting that we supply you with an Implementation Plan which outlines the steps and schedule to bring the Industrial Area Operable Unit (OU) project to logical closure. The attached Implementation Plan provides the information to effectively transition the field work to a logical stopping point and suspend further work towards Interagency Agreement deliverables. The Plan provides logical stopping points that are realistic and technically founded such that the projects are properly documented and are retrievable for future use. The Plan also contains a schedule for implementation of the closure efforts for the stop work order.

To clarify, prior to the issuance of the stop work order by the Department of Energy/Rocky Flats Field Office (DOE/RFFO), the field activities for the Industrial Area OU project were already coming to closure. The following summarizes the field activities during that time period:

- Non-intrusive field sampling efforts for OUs 8, 10, 12, and 14 were completed by mid-January 1995
- Soil gas sampling for OU 13 was completed during the second week of March 1995
- The tank investigation of OU 9 began on February 21, 1995 and is expected to be completed by the end of May 1995.
- OU 12 first round of sediment and surface water sampling of the drainages in the Industrial Area (time dependent) were collected mid-February through early March 1995. Also, the OU 12 sampling effort is allowed to continue according to a letter dated March 5, 1995 from the Colorado Department of Public Health and the Environment despite the stop work order.

EG&G initiated the stop work order following receipt of the March 7, 1995 letter to suspend development of Technical Memorandum efforts, and to prepare only data summary reports. At that time work was stopped on all data interpretation on OUs 8 and 14. Since OU 13 had completed 60 percent of the data interpretation effort prior to the stop work order, it was determined that the effort should be concluded to bring OU 13 to a logical closure. OU 13 also contains a task that supports the Industrial Area Interim Measures/Interim Remedial Action Decision Document. This task includes geographical information system support for data reduction and presentation for all Industrial Area OU data summaries. Additionally, this task

### CLASSIFICATION

|              |   |   |
|--------------|---|---|
| JCNI         |   |   |
| UNCLASSIFIED | X | X |
| CONFIDENTIAL |   |   |
| SECRET       |   |   |

### AUTHORIZED CLASSIFIER SIGNATURE

### DOCUMENT CLASSIFICATION REVIEW WAIVER PER

### DATE CLASSIFICATION OFFICE

IN REPLY TO RFP CG NO:

01126-RF-95

### ACTION ITEM STATUS

☒ PARTIAL/OPEN  
☒ CLOSED

### LTR APPROVALS:

ORIG & TYPE INITIALS  
BDP/dqi

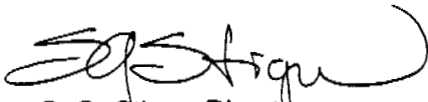
RF-46468 (Rev. 0/94)

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Jessie M. Roberson  
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Page 2

contains work to summarize existing ground water data in the Industrial Area and to justify that necessary and sufficient data exist in the Industrial Area in order to minimize additional installation of ground water monitoring wells and future characterization efforts. This task is expected to begin in June 1995 and continue through the remainder of the fiscal year.

Completion of this Implementation Plan has involved many meetings and parallel reviews with your staff to finalize the schedule and the Implementation Plan. These meetings and reviews have helped EG&G to ensure that the tasks in the Implementation Plan are reasonable and meet the expectations of DOE/RFFO. If you have any questions or require additional information regarding this matter, please contact B. D. Peterman of my staff at extension 8659 or digital pager 5472.



S. G. Stiger, Director  
Environmental Restoration Program Division  
EG&G Rocky Flats, Inc.

BDP:dql

Attachment:  
As Stated

Orig. and 1 cc -- J. M. Roberson

cc:  
M. N. Silverman - DOE/RFFO

# **Industrial Area Operable Units**

## **Stop Work Order**

### **Implementation Plan**

**May 2, 1995**

## 1.0 INTRODUCTION

This Implementation Plan provides the information to effectively bring to logical closure the current Industrial Area Operable Unit (IA OU) Project in accordance with the recommendations from the February 8, 1995 Quality Action Team and more specifically the March 7, 1995 stop work order from DOE/RFFO. The QAT consists of representatives from DOE/RFFO, EPA Region VIII, and CDPHE. The parties agreed to stop work on Interagency Agreement milestones pending discussions to reconfigure the Industrial Area Operable Units into a more cost effective and manageable program that will eliminate burdensome administrative requirements and redundancy. In addition, this plan identifies activities that EG&G deems critical to continue to allow for a smooth transition for logical closure of ongoing activities. For record keeping purposes preparation of field summary reports, data compilation, and tabulation, shall continue but no data interpretation or analysis is planned to occur. A schedule for implementation is included as Figure 1. The following are the OUs addressed in this Implementation Plan and their expected closure dates based on the attached schedule.

| OPERABLE UNIT | DESCRIPTION                        | COMPLETION OF DATA<br>SUMMARY REPORTS |
|---------------|------------------------------------|---------------------------------------|
| OU 8          | 700 AREA                           | NOVEMBER 2, 1995                      |
| OU 9          | INTRUSIVE TANK<br>CHARACTERIZATION | NOVEMBER 28, 1995                     |
| OU 10         | OTHER OUTSIDE<br>CLOSURES          | COMPLETED JANUARY<br>23, 1995*        |
| OU 12         | 400/800 AREA                       | MARCH 19, 1996                        |
| OU 13         | 100 AREA                           | JULY 3, 1995                          |
| OU 14         | RADIOACTIVE SITES                  | JULY 17, 1995                         |

\*The technical aspects of OU 10 are completed and draft Technical Memoranda submitted. However, because of contractual obligations this project will continue to incur minimal costs for General Project Support, as explained in Section 2.1.1 of this Implementation Plan.

## **2.0 PROJECT TASKS**

As described below, overall project tasks for project conclusion include compilation and transmittal of results from surface soil, surface water, sludge sediment, soil borings, radiological samples, and soil gas records to the Record Center in accordance with procedure 2-G18-ER-ADM-17.01, Records Capture and Transmittal; and return of government furnished equipment and inventory. OU project-specific tasks include completion of ongoing fieldwork and completion of the Data Summary Reports (including responding to one round of internal review comments).

### **2.1 OVERALL PROJECT TASKS**

The following text presents information regarding the rigorous records transfer requirements for the project. Significant effort is still required to transfer the field data records to the Records Center. Since this is a substantial effort, the schedule (Figure 1) reflects these time frames. The general project support category is also explained.

Additionally, property inventory and transfer will need to be completed. This includes inventory and transfer of government furnished equipment that was used during the project. The contractual closeout of the project will include the subcontractor's release and assignment of refunds, rebates, and credits.

#### **2.1.1 General Project Support**

Weekly project meetings, project sampling reports, monthly budget status reports, and other contract/administrative activities for the overall project fall under the category of general project support for each OU. General project support will be maintained until OU 12 has been closed, currently targeted for March 19, 1996. However, overall project support staff will be reduced significantly since only one OU will be dealt with during this time period.

### **2.1.2 Records Transmittal**

The overall project tasks include transmittal of the office- and field-generated records to the Environmental Restoration Program Division Records Center. This includes reports, letters, raw data, copies of logbook pages, field laboratory documents including chromatograms from soil gas analysis, and other laboratory data. The following presents a discussion of some of the types of documents that are transmitted both from the field and the office.

#### **2.1.2.1 Field Records**

Records transmitted from the field activities include the following:

- field forms (sample collection, pre-activity);
- chain-of-custody;
- calibration logs;
- health and safety documentation;
- equipment maintenance;
- permits (soil disturbance, pre-evolution, briefing, burn [for drilling]);
- drilling forms; and
- logbooks.

Records are broken down by group for submittal to the Records Center, such as the following:

- IHSS, sample location;
- type of form, if not sample location-specific (e.g., calibration, permits); and
- per day, if applicable.

Before records transfer, the following must be completed:

- Paginate each page.

- Stamp pagination or hand write as "page\_\_of\_\_."
- Check for proper initials/corrections.
- Check contents, sample numbers, dates, correct equipment used, calibration, volume, and completeness.
- Correlate between multiple records, as applicable.
- Check entry verification.

The following are some of the types of data and media affected by the records transfer:

- |                              |                          |
|------------------------------|--------------------------|
| • soil gas;                  | • borehole (OU 9);       |
| • surface water;             | • hydropunch;            |
| • sediment;                  | • sodium iodide surveys; |
| • global positioning system; | • asphalt;               |
| • vertical soil profile;     | • tank sampling; and     |
| • surface soil;              | • core logs.             |

The following are some of the data required to be transmitted for procurement closeout:

- inventory updates transferred;
- list of rental property returned;
- list of items transported for disposition; and
- quality control checks of documentation.

#### **2.1.2.2 Office Records**

The type of records transmitted to the Records Center from the office include monthly status reports, weekly project reports, monthly accrual reports, invoices, contract/schedule performance reports, technical reports, and other miscellaneous letters. On average the transmittal of these documents represents between 500 and 1,000 pages monthly, depending on the size of the technical reports.

## 2.2 OPERABLE UNIT 8 - 700 AREA

To logically close out the non-intrusive portion of this OU, a Data Summary Report will need to be prepared that will effectively document the data collected to date. The Data Summary Report will contain the following

- Introduction. The Introduction includes the background, history and summary of previous work.
- Methods of Investigation. This section includes the methods used to collect the data and provides figures illustrating the sample locations. Data collection includes visual surveys, in situ radiological surveys (high purity germanium [HPGe] and sodium iodide), vertical profile sampling, asphalt/concrete sampling, surface soil sampling, sediment and surface water sampling, soil gas surveys, and foundation drain and sediment sampling.
- Data Summary. The Data Summary provides tables of the results of the laboratory analyses and figures illustrating the results of the analyses.
- Statistical Assessment of Surface Soil Data. This section statistically assesses each IHSS to ensure that a sufficient number of samples were collected for a thorough characterization in accordance with the Phase I RFI/RI Work Plan Data Quality Objectives. This task provides the basis to document what was proposed to be completed per the Phase I RFI/RI Work Plans and what was actually completed during the field investigation. For example, it was quite common in the IA that sampling points that were planned to be taken could not be because of conflicts with utilities.
- References. This includes reference to the operating procedures (OPs) followed, and any other references used to tabulate the data.
- Appendices. These include the data collected.

To prepare the Data Summary Report, the analytical data from the laboratory must be received by Rocky Flats Environmental Data System (RFEDS) and 20 percent of that data must be validated. As of April 21, 1995, the following had been accomplished:

- Ninety-five percent of the organic analytical data have been received by RFEDS, and 22 percent are validated.
- One hundred percent of the metal analytical data have been received by RFEDS, and 92 percent are validated.
- Ninety-seven percent of the radiological data have been received by RFEDS, none of which have been validated.
- Zero percent of the vertical soil profile data have been received by RFEDS. These data will not be validated because they are being used to compare in situ and laboratory radiological methods.

Based on experience with data for OUs 10, 12, and 13, it takes approximately 45 calendar days to receive non-radiological laboratory analysis, 65 calendar days to receive radiological laboratory analysis, and 45 calendar days for data validation. Therefore, based on these assumptions, the OU 8 Data Summary effort is expected to begin on June 13, 1995, and be completed on October 13, 1995 (Figure 1). To determine data adequacy and completeness, an internal review will be conducted and preparation of another draft of the document will occur based on the review. The second draft is expected to be completed by January 18, 1996 (Figure 1).

The Environmental Evaluation (EE) task that was scheduled to be performed under OU 8 in FY95 for the entire IA will not be initiated. Though this task is a time-dependant activity (i.e. spring and fall sampling events), many changes have been made programmatically to the requirements for EEs since development of the original technical scope. Thus, the performance of this task would require a re-negotiation effort with the regulators in order to identify new data requirements versus the original objectives

outlined in the EE plan developed and approved in 1992.

### **2.3 OPERABLE UNIT 9 - INTRUSIVE TANK CHARACTERIZATION AND SUBSURFACE BOREHOLE INVESTIGATION**

The ongoing field investigations for OU 9 include the characterization of subsurface conditions for the outside tanks, tank residue sampling and tank inspections. To date, 15 out of 23 groundwater samples, 11 out of 15 tank residue samples, 11 out of 14 surface soil samples have been collected and 95 out of 115 boreholes have been completed. These field activities are expected to be completed by the last week of May 1995. A Data Summary Report will be prepared that will document the collection of the data. This effort is expected to begin as soon as the tank characterization and subsurface borehole investigation field activities have been completed, including follow-up sodium iodide surveys to verify HPGe anomalies identified around the OU 9 outside tanks. The first data collected for OU 9 were submitted to the contract laboratories the last week of February 1995. Therefore, OU 9 data should begin to be received and RFETS validated by the first week of June 1995, with the additional validated tank data continuing to be received through August 1995.

Because both the tank characterization/inspection and borehole findings have been significantly different from what the historical RFETS information initially indicated for the OU 9 Work Plan development, a critical section of the Data Summary Report needs to reconcile previous information and actual tank and surrounding soil condition information. Individual contaminant volumes, concentrations, and tank release potential will need to be included.

The Draft Data Summary Report will be complete on October 20, 1995 (Figure 1). In order to determine data adequacy and completeness, an internal review will be conducted and preparation of a second draft of the document will be developed based on the review. The second draft is expected to be completed by January 18, 1996.

## **2.4 OPERABLE UNIT 10 - OTHER OUTSIDE CLOSURES**

This OU was the first completed for the IA OUs. A second draft of TM No.1 was submitted to EG&G on January 16, 1995, and delivered to the U.S. Department of Energy (DOE) and the regulatory agencies. This draft incorporated comments from EG&G and DOE. No further activity is anticipated on this OU. Data have been adequately documented for effective transition to the IA Reconfiguration Plan as outlined in the RFCA.

Accelerated actions are being pursued by the DOE/RFFO and EG&G accelerated action group. However, this activity is managed under the OU 10 ADS for fiscal year 95.

## 2.5 OPERABLE UNIT 12 - 400/800 AREA

The first draft of TM No.2 was delivered to EG&G on February 24, 1995. This draft has some errors resulting from several data management problems. This needs to be corrected and comments incorporated into the document. Because of schedule constraints, the current document also did not include 10 percent of the laboratory analytical data. The draft final version of TM No. 2 is expected October 30, 1995; this version will have the data errors corrected and the remaining 10 percent of the data (asphalt and concrete sampling data and high purity germanium radiological survey data) included, and will not require revisiting any data interpretation and recommendations.

In addition, this OU has the additional task of funding the IA-wide surface water and sediment sampling program. As part of this IA-wide program, three time-dependent sampling events are required. The first was completed before an IA ditch-cleaning effort, the second during the wet season, and the third during the dry season. These sampling events relate to the time-dependent sampling allowed under the Stop Work Order dated March 7, 1995. To date, the first sampling event has been completed and the second event is ongoing (Figure 1). The final dry season event is scheduled for September 1995. Field records from these sampling events will need to be transferred to the Records Center. Additionally, a Field Data Summary Report will be prepared to adequately document the data collection activities and the sampling conditions for appropriate transition to the new IA reconfiguration. This Data Summary Report will be a reduced effort in comparison to the other OUs summaries for non-intrusive work. The report will only include the Methods of Investigation and Data Summary sections as described for OU 8 under section 2.2. Additionally, the Data Summary Report will be initiated prior to receiving full data validation, thus the report is anticipated to be completed by March 19, 1996.

## 2.6 OPERABLE UNIT 13 - 100 AREA

This OU was in the process of completing the non-intrusive TM when the stop work order was received. The data will now be reported in a Data Summary Report but will contain the recommendations section since most of the work had already been completed. The first draft Data Summary Report is anticipated to be complete on June 16, 1995. Internal review and revision of the document based on data adequacy and completeness criteria is planned to be finished by September 10, 1995.

The data have been received and data validation is complete for this OU except for the asphalt data. Approximately 60 percent of the asphalt data are outstanding, and none of them are validated. Once this data is available, it will be compiled into a form to be included in the Data Summary Report.

## 2.7 OPERABLE UNIT 14 - RADIOACTIVE SITES

To logically close out the non-intrusive portion of this OU, a Data Summary Report will need to be prepared that will document the data. The Data Summary report will contain the following:

- Introduction. The Introduction includes the background, history and summary of previous work.
- Methods of Investigation. This section includes the methods used to collect the data and provides figures illustrating the sample locations. Data collection includes visual surveys, in situ radiological surveys (HPGe and sodium iodide), surface soil sampling, and soil gas surveys.
- Data Summary. The Data Summary provides tables of the results of the laboratory analyses and figures illustrating the results of the analyses.
- Statistical Assessment of Surface Soil Data. This section statistically assesses each

IHSS to determine whether a sufficient number of samples were collected for a thorough characterization in accordance with the Phase I RFI/RI Work Plan Data Quality Objectives.

- References. This section includes reference to the OPs followed and any other references used to tabulate the data.
- Appendices. These include data collected.

To prepare the Data Summary Report, the analytical data from the laboratory must be received by RFEDS and 20 percent of the data must be validated. As of April 5, 1995, 100 percent of the organic, pesticide/herbicide, metal, and radiological laboratory analytical data have been received by RFEDS; As of April 5, 1995, the following had been accomplished:

- Sixty-one percent of the volatile organic data are validated.
- Fifteen percent of the semivolatile organic data are validated.
- Zero percent of the herbicide/pesticide data are validated.
- One hundred percent of the metal data are validated.
- Twenty-four percent of the radiological data are validated.

The OU 14 Data Summary effort began on March 17, 1995 and will be complete by June 23, 1995 (Figure 1). After internal review to determine data adequacy and completeness, the second draft is expected to be complete on October 11, 1995 (Figure 1).

### **3.0 OTHER IA ACTIVITIES FOR CONSIDERATION**

Based on our discussions, continuation of the following activities is believed to be critical. A list of the activities is presented for DOE's consideration. Specifically, the activities include the soil-gas data collection effort for OU 8, the OU 9 follow-on tank investigations, and the further investigation of the free product discovery in IHSS 128 in OU 13.

#### **3.1 SOIL GAS COMPLETION - OPERABLE UNIT 8**

During the soil gas non-intrusive investigations for OU 8, 46 of the 85 soil gas samples specified in the RFI/RI Work Plan were collected. The remaining samples were not collected due to utility interference. It is proposed that an action plan be developed and implemented to collect soil gas samples outside of the boundaries of the OU 8 IHSSs in order to more accurately define the nature and extent of contamination.

#### **3.2 OU 9 FOLLOW-ON INTRUSIVE INVESTIGATIONS**

As discussed in Section 2.3, OU 9 intrusive investigation findings have identified significantly higher contaminant levels than previously expected. Additionally, many of the tanks have been found to have significant solid and or liquid volumes remaining, (even tanks that were thought to be previously decommissioned, cleaned and painted). The presence of remaining solids and liquids (it is not known whether these liquids are remaining waste residues or surface water/groundwater intrusion) indicates that follow-on activities need to be instituted to fully remove waste residues from the tanks and determine their contribution to the RFETS IA contaminant fate and transport regime. Follow-on activities for consideration include the following:

- Delineate horizontal and vertical extent of carbon tetrachloride contamination found in borehole locations around Building 730 (tanks T-9/10). Multiple-phase dense non-aqueous phase liquid (DNAPL) contamination was found in boreholes at the alluvial/bedrock interface (at approximately 20 feet below land surface [bls]).

Considering the volume of DNAPL observed, it appears that a recovery system could easily be installed. Also, further delineation of this contaminant plume should be considered.

- Removal of radioactive wastes (up to 3.0 microcuries/gram in sludges) from tanks T-9/10 (Building 730) and T-14/16 (Building 794) is recommended. While the structural integrity of these tanks appears to be satisfactory, elevated radiological contaminants in these tanks should be removed before a release could occur. Sludges and liquids were identified that could justify early action to remove these materials and clean these tanks.
- Pump tank T-40 (Building 889) contents to allow a tank integrity evaluation and complete tank characterization. Because of the presence of liquids at T-40 to within 3 feet from the top of the vault (liquids are suspected to be from surface water or groundwater infiltration), only a liquid grab sample could be collected from the vault, and initial radiation screen results indicated above-background concentrations for gross alpha and beta contamination. A complete tank characterization effort could not be performed. If this tank were pumped to a point where a tank integrity inspection could be completed, residue sampling in the bottom of the tank could also be performed (if required). A more complete understanding of the potential for this tank to cause cross-contamination to surrounding soils/groundwater media would be available.

### **3.3 IHSS 128 - OPERABLE UNIT 13**

On January 4, 1995, the soil gas crew was sampling at locations SG13094 in IHSS 128. At a depth of between approximately 4 to 10 feet bls a thick brown-black sludge was observed on the soil gas rods when they were removed from the hole. On February 27, 1995, a sample of the sludge was collected at soil gas location SG13094 using EG&G's geoprobe tool and it was laboratory analyzed for volatile organic compounds, semivolatile compounds, and metals.

It is recommended that the investigation of this IHSS continue with the following activities:

- Soil gas investigations should proceed and should include development of the third-dimensional data in areas of known contamination.
- A remedial action plan should be developed for further accelerated investigations and/or remedial actions should begin in areas where high levels of contamination have been found.

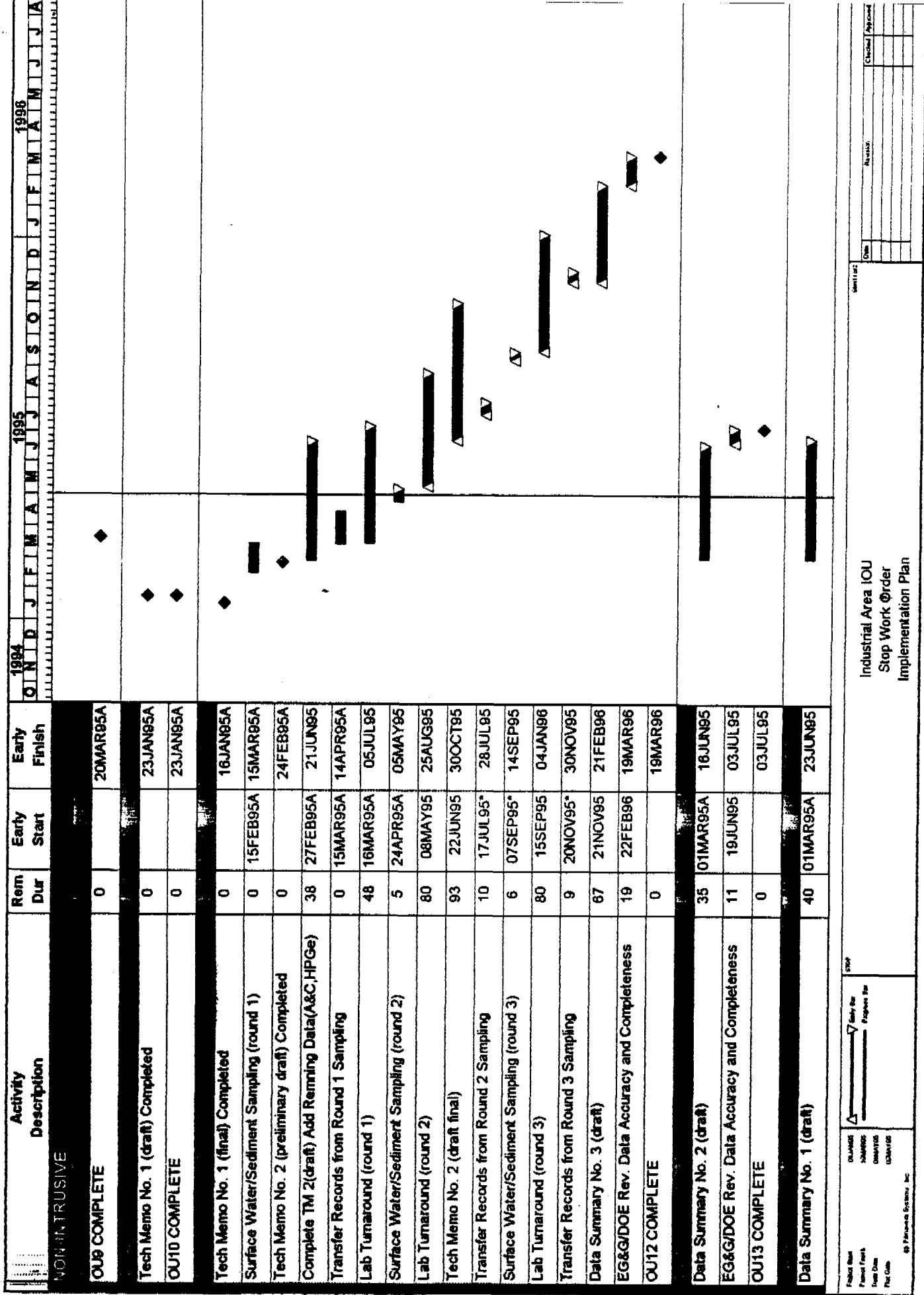


Figure 1  
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